



**COMPREHENSIVE**  
**PROPANE / AIR PLANT REPORT**

**OPERATOR (A-O) (P-Z)**

**INSPECTOR(S):**

**DATE**

**PIPELINE SAFETY**

**SOUTH CAROLINA OFFICE OF REGULATORY STAFF**

**EVALUATION OF PROPANE AIR PLANTS**

Operator Evaluated: **(A-O)**      **(P-Z)**

Official:

Location:

Telephone:

Personnel Interviewed:

Commission Representative(s):

Date/s:

Date of Last Inspection:

1.

2.

3.

TYPE OF FACILITY: Base Load      Peak Shaving

Year Facility Was Placed In Operation:

Storage Tank Constructor:

Vapor Rate, NMCFD:

Distance from buildings or Residences:

Number of Vaporizers:

**6-5.1** Is each vaporizer provided with a relief device providing an effective rate of discharge in accordance with 5-2.5 ?

YES  NO  N/A

**NFPA 59, 10-3**

Number and Volume (gallons) of each storage tank:

Fire detection and protection and type:

1. Gas
2. Fire
3. Fire Water Distribution:
  - A. Number of
  - B. Type
  - C. Date Last Inspected
4. Number of Dry chemical units and type of each:
5. Date of Last Inspection of each:

**1. Reporting** - Are leaks and spills reported and records kept in accordance with part 191?

YES  NO  N/A

**NFPA 59, 8**

**2. Plans and Procedures** - Are current plans available at the Propane Air facility for:

A. Operating Procedures? YES  NO  N/A

B. Emergency Procedures? YES  NO  N/A

C. Transfer Procedures? YES  NO  N/A

D. Maintenance Procedures? YES  NO  N/A

F. Initial and Continuing Training Plans for:

(1). Operations and Maintenance? YES  NO  N/A

(2). Fire Protection? YES  NO  N/A

**3. Corrosion Control Overview** - Are repairs, replacements, or significant alteration of components reviewed if the action to be taken relates to at least one of the following:

A. Involves a change in the original materials specified?

YES  NO  N/A

B. Is due to failure caused by corrosion?

YES  NO  N/A

C. Is occasioned by inspection revealing a significant deterioration of the component due to corrosion?

YES  NO  N/A

**NFPA 59, 8-1**

**4. Operating Procedures** - Does the operator follow one or more manuals of written procedures for:

A. Monitoring components in operation or buildings in which a hazard to persons or property exist?

YES  NO  N/A

B. Start up and shut down, including initial start up, and performance testing?

YES  NO  N/A

C. Recognizing abnormal operating conditions?

YES  NO  N/A

D. Purging and inerting components?

YES  NO  N/A

E. In the case of vaporization, insuring that the resultant gas is within limits established for the vaporizer and the downstream piping?

YES  NO  N/A

F. Compliance of fire plan in accordance with 192.615?

YES  NO  N/A

**NFPA 59, 10-3**

**5. Emergency Procedures**

A. Has the operator determined the types and places of emergencies other than fire that may reasonably be expected to occur at a Propane Air Plant?

YES  NO  N/A

B. To adequately handle each type of emergency follow written procedures that provide for the following:

(1). Responding to a controllable emergency?

YES  NO  N/A

(2). Recognizing an uncontrollable emergency and taking action to minimize harm to the public and personnel?

YES  NO  N/A

(3). Coordinating with appropriate local officials in preparation of an emergency evacuation plan?

YES  NO  N/A

(4). Cooperating with appropriate local officials in evacuations and emergencies:

YES  NO  N/A

(5). Requiring mutual assistance and keeping these officials advised of:

(a). The Propane Air plant fire control equipment ?

YES  NO  N/A

(b). Potential hazards at the plant, including fires ?

YES  NO  N/A

(c). Communication and emergency control capabilities at the Propane Air Plant?

YES  NO  N/A

(d). The status of each emergency?

YES  NO  N/A

(e). In the case of vaporization, insuring that the resultant gas is within limits established for the vaporizer and thr downstream piping?

YES  NO  N/A

## **6. Transfer Procedures**

A. Does the operator have one or more written procedures for the transfers of Propane or other hazardous fluid?

YES  NO  N/A

B. Do the transfer procedures include provisions for personnel to:

(1). Verify that the transfer system is ready for use.

YES  NO  N/A

(2). Verify that each receiving container (storage tank or truck) is adequate in capacity and does not contain contaminated substance?

YES  NO  N/A

(3). Verify maximum fill volume?

YES  NO  N/A

(4). Verify that the transfer operations are proceeding within design conditions?

YES  NO  N/A

(5). E.S.V. at the unloading location.

YES  NO  N/A

(6). Deactivate cargo transfer systems in a safe manner?

YES  NO  N/A

C. Are the procedures for cargo transfer located at the transfer area?

**YES**  **NO**  **N/A**

D. Do the procedures include provisions for:

(1). Constant attendance during cargo transfer operations?

**YES**  **NO**  **N/A**

(2). Prohibiting the backing of tank trucks in the transfer area, except when a person is available for a guide?

**YES**  **NO**  **N/A**

(3). Before transfer, verifying that:

(a). Each tank car or tank truck complies with applicable regulations governing its use?

**YES**  **NO**  **N/A**

(b). All transfer hoses have been visually inspected for damage and defects?

**YES**  **NO**  **N/A**

(c). Each tank truck is properly immobilized with chocked wheels and electrically grounded

**YES**  **NO**  **N/A**

(d). Each tank truck engine is shut off unless it is required for transfer operations?

**YES**  **NO**  **N/A**

(4). Preventing a tank truck engine that is off during transfer operations from being restarted until the transfer lines have been disconnected and any released vapors have been dissipated?

YES  NO  N/A

(5). Verifying that all transfer lines have been disconnected and equipment cleared before the tank truck is moved from the transfer position?

YES  NO  N/A

(6). Verifying that transfers into a pipeline system will not exceed the pressure limits of the system?

YES  NO  N/A

**7. Investigation of Failures** - does the operator investigate the cause of each fire, explosion, or propane spill or leak?

YES  NO  N/A

**NFPA 59, 8-4**

**8. Operationg Records**- Are maintenance, inspection, test, and investigation

records maintained for a period of not less than five years?

YES  NO  N/A

**9. General**

A. Does the operator maintain each component in service in a condition that is compatible with its operational or safety purpose by repair, replacement, or other means?

YES  NO  N/A

B. Does the operator insure that an improper component is not placed, returned or continued in service?

YES  NO  N/A

C. Are components taken out of service identified in the records?

YES  NO  N/A

D. When a safety device is taken out of service for maintenance, is its safety function provided by an alternate means?

YES  NO  N/A

E. When a component that could cause a hazard is taken out of service is a tag attached to the controls bearing the words "do not operate"?

YES  NO  N/A

**NFPA 59, 9-1**

**10. Maintenance Procedures** - Follow written maintenance procedures to include test, maintenance and inspection for:

A. Foreign materials, contaminants, ice, rubbish and debris?

YES  NO  N/A

B. Inspection of support system foundations?

YES  NO  N/A

C. Fire protection inspections and accessible routes for movement of equipment in the

Propane Air Plant for use in all weather conditions?

YES  NO  N/A

D. Auxiliary power sources monthly for operational capability and annually for capacity? (if applicable)

YES  NO  N/A

E. Isolating and purging, where necessary?

YES  NO  N/A

F. Performing and testing repair work including precautions to maintain the safety of personnel and property?

YES  NO  N/A

G. Control systems to operate within design limits and (if out of service 30 days or more) for operational capability before returning to service?

YES  NO  N/A

H. Control systems in service, but not normally in operation such as relief valves and automatic shutdown devices?

YES  NO  N/A

I. Control systems used seasonally such as for vaporization?

YES  NO  N/A

J. Control systems intended for fire protection?

YES  NO  N/A

K. Control systems that are normally in operation, such as required by base load system?

YES  NO  N/A

L. Relief valves for verification of valve seat lifting pressure and reseating?

YES  NO  N/A

M. Transfer hose for damage or defects before each use?

YES  NO  N/A

N. Propane Air storage tanks to verify that the following conditions does not impair the structural integrity or safety of the tank.

YES  NO  N/A

(1). Foundation and tank movement?

YES  NO  N/A

(2). External, buried or submerged, 192.457?

YES  NO  N/A

(3). Internal Protection?

YES  NO  N/A

(4). Interference currents, 192.473?

YES  NO  N/A

O. Monitoring corrosion as required by:

(1). Buried or submerged components under cathodic protection to determine if it meets the requirements of 192.463?

YES  NO  N/A

(2). Components that are protected from atmospheric corrosion?

YES  NO  N/A

**11. Remedial Measures** - Prompt corrective remedial action is taken when inspections reveal that atmospheric, external, or internal corrosion is not being controlled?

YES  NO  N/A

**NFPA 59, 9-5**

**12. Maintenance Records**

A. Records of date and type of maintenance activity?

YES  NO  N/A

B. Records or maps showing location of cathodically protected components, nearby structures bonded to the protected system, and corrosion protection equipment?

YES  NO  N/A

C. Are records of each test survey or inspection required in sufficient detail to determine compliance?

YES  NO  N/A

**NFPA 59, 1-1.3**

**13. Operation and Maintenance**

A. For operation and maintenance uses only those personnel who have demonstrated their capability to perform their assigned functions by:

(1). Experience related to the assigned operation or maintenance function?

YES  NO  N/A

(2). A person not qualified only operates or maintains a component when assigned by a qualified person?

YES  NO  N/A

(3). Corrosion control systems are maintained by or under the direction of a qualified person?

YES  NO  N/A

**NFPA 59, 10-1.4**

**14. Training O & M**

A. Written plans of initial training to instruct:

(1). All maintenance, operating, and supervisory personnel:

(a). Propane characteristics?

YES  NO  N/A

(b). Potential hazards?

YES  NO  N/A

(c). To carry out O & H procedures that relate to assigned functions?

YES  NO  N/A

(2). All personnel:

(a). Emergency procedures under 192.615 that relate to assigned function?

YES  NO  N/A

(b). First aid?

YES  NO  N/A

(3). All operating and appropriate supervisory personnel:

(a). Verification of training for facility operations:

YES  NO  N/A

(b). Propane transfer operations:

YES  NO  N/A

B. Training scheduled at 2 year minimum intervals?

YES  NO  N/A

**NFPA 59, 10-9**

**15. Security**

A. To recognize a problem and be familiar with basic plant operation and emergency procedures?

YES  NO  N/A

**16. Training: Fire Protection**

A. All personnel involved in maintenance and operations of a Propane Plant including immediate supervisors must be trained in:

(1). Accidental spills?

YES  NO  N/A

(2). High fire risk areas?

YES  NO  N/A

(3). The types, sizes, and possible consequences of fire?

YES  NO  N/A

(4). Know and perform assigned fire control duties and proper use of equipment?

YES  NO  N/A

**17. Storage of Flammable Fluids** – Are flammable fluids being stored in areas where ignition sources are not present?

YES  NO  N/A

**NFPA 59, 10-3**

**18. Leak Detection**

A. A portable gas detector is available at the Propane Air Plant for use at all times?

YES  NO  N/A

**NFPA 59, 10-9.2**

**19. Protective Enclosures**

A. Surrounded by protective enclosures:

(1). Storage tanks?

YES  NO  N/A

(2). Cargo transfer systems?

YES  NO  N/A

(3). Control rooms and stations?

YES  NO  N/A

(4). Control systems?

YES  NO  N/A

(5). Fire control equipment?

YES  NO  N/A

(6). Security communications systems?

YES  NO  N/A

(7). Alternative power sources? (if applicable)

YES  NO  N/A

B. Protective enclosures away from features such as poles, or buildings where security could be breached?

YES  NO  N/A

C. Protective enclosures provided with at least 2 accesses that are locked or continuously guarded with a means available for plant personnel in the event of emergency?

YES  NO  N/A

## **20. Protective Enclosure Construction**

A. Protective enclosure to obstruct unauthorized access?

YES  NO  N/A

B. Fenced or wall constructed as follows:

(1). Chain link fence?

YES  NO  N/A

(2). Vertical wall constructed of stone, brick, cinder block, concrete, steel or comparable material?

YES  NO  N/A

(3). Fence or wall to have 3 or more strands of barbed wire or similar materials on angled brackets?

YES  NO  N/A

(4). Openings secured by grates, doors, or covers?

YES  NO  N/A

**21. Security Communications**

A. Provide for prompt communications between personnel having supervisory security duties and law enforcement officials?

YES  NO  N/A

B. Direct communications between all on-duty personnel having security duties and all control room and stations?

YES  NO  N/A

**22. Security Lighting**

A. Provide adequate lighting between sunset and sunrise around the facilities and each protective enclosure?

YES  NO  N/A

**23.** Does each tank have a suitable Pressure Gage?

YES  NO  N/A

**24. 4-4** Is each tank equipped with an approved Liquid Level Gaging device?

YES  NO  N/A

**25.** Does Each tank have a working thermometer installed?

YES  NO  N/A

**26.** Are there Brass or Bronze tools available for leak repairs?.

YES  NO  N/A

**27.** Are there Relief Valves on storage tanks?

YES  NO  N/A

**28.** Are there Relief Valves on Liquid Pumps - discharge relieving back to the storage tanks?

YES  NO  N/A

**29.** Is there a bypass check valve at vaporizer?

YES  NO  N/A

**NFPA 59, 6-3**

**30.** Relief Valve Tested in accordance with this section? Last date tests or replacement done?

YES  NO  N/A  **DATE**

**NFPA 59, 6-6**

**31.** Are there Hydrostatic Relief Valves where required? The date of the last Tests or replacements?

YES  NO  N/A  **DATE**

**NFPA 59, 5**

**32.** Does the Vaporizer have a high temperature shut-off?

YES  NO  N/A

**33.** Does the Vaporizer have a low water shut-off?

YES  NO  N/A

**Please list any non-compliances along with the applicable code section in**

**addition to any additional comments:**